

PDR RID Report

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Document GDAAC-CSMS-UserBandwidth Scheduling

RID ID	PDR	256
Review	CSMS	
Originator Ref	Communication Requirements	
Priority	2	

Section 4.3

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Figure Table Table 4.3-1

Category Name Requirements

Actionee HAIS

Sub Category

Subject NSI Bandwidth Requirements Need Scheduling Contingency

Description of Problem or Suggestion:

The ESN WAN Bandwidth Requirements include a factor of 1.5 scheduling contingency (based on 16 hour operation) for DAAC-to-DAAC communications, together with circuit utilization and protocol overheads. However, the NSI Bandwidth requirements for data flow to users includes only the latter two factors, although users also "operate" at limited times during the day. This is demonstrated by the GSFC DAAC's FTP transfer hourly statistics from August through January, which show that most of the data is transferred during a limited time.

Hourly Breakdown

Hr Files Vol-MB KB/s Avg Log Size

00	761	708	52.28	3.59
01	1298	1595	14.66	3.54
02	20	413	7.52	5.83
03	44	756	5.86	4.73
04	22	825	8.47	6.13
05	34	300	6.28	4.87
06	12	158	4.77	5.09
07	65	233	21.53	4.11
08	1349	1838	9.61	4.06
09	3446	1932	10.51	3.70
10	3492	2511	33.98	3.63
11	1297	3153	23.53	3.98
12	1405	2506	14.66	4.12
13	2030	3566	24.57	3.85

Originator's Recommendation

Include a scheduling factor, derived from actual existing data where possible/appropriate, in the NSI Bandwidth requirements, and propagate that factor to whatever requirements or design have been traced to those requirements.

GSFC Response by:

GSFC Response Date

HAIS Response by: Forman

HAIS Schedule 2/28/95

HAIS R. E.

HAIS Response Date 3/17/95

We agree that applying a peaking factor would be useful in showing how we anticipate distribution over a 24 hour period. However, the sizing of the NSI link is currently being considered based on a specified, budget-driven constraint provided by ESDIS and not by actual user demand (i.e., the "user model" developed by Hughes). To apply peaks on a budget driven output rate is, we believe, artificial. The rates provided do show the peak data output that can occur at any given time from the DAAC, taking into consideration protocol and circuit overheads.

The potential for staging and scheduling data to users has not been fully explored. This practice would most likely result in a flatter distribution curve than has been experienced at the DAACs. (See response to RID 158.)

Status **Closed**

Date Closed **4/12/95**

Sponsor **desJardins**

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***** Attachment if any *****
